

LIST OF AN ORNITHOLOGICAL COLLECTION

MADE BY DR. PERCY RENDALL ON THE UPPER SHIRÉ RIVER,
NEAR FORT JOHNSTON, AND ON THE SHORES OF THE
SOUTHERN PARTS OF LAKE NYASSA.

By ERNST HARTERT.

ALTHOUGH the collection of which a list is here given does not contain any remarkable new species, only a closely allied subspecific form being provided by me with a new name, it will be of interest for the closer study of the geographical distribution of African birds to see what Dr. Rendall found, and the very detailed informations on all his labels will often be of value, as well as notes on nests and eggs which he found, some of the latter not having been described before.

1. *Saxicola pileata* Gm.

May and June, Upper Shiré River. These specimens seem to me to be perfectly like those from the Transvaal, Natal, and the Cape of Good Hope.

2. *Acrocephalus arundinaceus* (L.).

On March 3rd, Fort Johnston.

3. *Acrocephalus gracilirostris* (Hartl.).

March 2nd, Upper Shiré River. "Iris dark brown; bill above horn-colour, base of mandible pinkish white, gape yellow; feet dark steel-colour."

The nest of this bird was found to be constructed like that of other Reed-Warblers, hanging between three upright reed-halms. It consists of grasses, which are finer inside than outside, and some of which have even now—about nineteen months after it was taken—an aromatic smell. On one side a piece of a snake-skin is woven into the nest. The egg resembles paler varieties of *Acrocephalus streperus*, and if mixed with them would not easily be found out again. It is of the same dimensions, greyish white, all over spotted with pale brown and olive-grey, these spots forming a loose ring near the thick end.

A. gracilirostris is in my opinion a true Reed-Warbler, though its long first primary would place it in the genus *Luscinola* if that character alone were considered. I do not know whether *A. gracilirostris* is its oldest title. See *Cat. B. Brit. Mus.* V. p. 122.

4. *Cichladusa arquata* Peters.

♀. June, Upper Shiré River. "Bill dull black; iris yellowish grey; tarsus purplish grey, verging into brown on the feet, claws light horn-colour. Grops filled with insects and a few seeds. Call-note very harsh and jarring."

5. *Cossypha heuglini* Hartl.

♂ ad. February, Fort Johnston. This specimen has the abdomen distinctly lighter than a *male* collected at Bagamoyo by Emin Pasha.

6. *Crateropus kirki* Sharpe.

♂ ad. Kambwe, Lake Nyassa, August 1895. "One of a noisy party, with harsh rattling cries and chorus. Bill black; iris deep orange, with a bright yellow ring round the pupil."

C. kirki resembles *C. jardinei* from S. Africa, but differs in being smaller and having the abdomen browner, the tail not so dark. It differs specifically from *C. plebejus* of N.E. Africa. A female from Dar es Salaam does not differ materially from Dr. Rendall's bird.

7. *Cisticola natalensis* (Smith).

July 31st, Upper Shiré River. "Bill above horn-colour, fading to pinkish horn on lower mandible; iris hazel; feet flesh-colour."

8. *Cisticola lugubris* (Rüpp.).

April and June, Fort Johnston and Upper Shiré River. "Bill horn-colour; legs and feet flesh-colour; iris yellowish brown." "This bird has a habit of throwing up its tail when moving among the reeds and rushes." Also February, Upper Shiré River, in greyish plumage, while the others were in brownish plumage.

9. *Cisticola cisticola* (Temm.).

June, Upper Shiré River.

10. *Prinia mystacea* Rüpp.

September, Monkey Bay. "Iris yellowish hazel."

11. *Pycnonotus layardi* Gurney.

Kambwe, Lake Nyassa, August. "Bill, feet, and tarsi black; irides dark brown; eyelids black and carunculate. Stomach full of coleopterous remains."

12. *Cinnyris cupreus* (Shaw).

A male, shot on the Upper Shiré River on March 4th, 1896, certainly belongs to *C. cupreus*, but that species can probably be separated into several more or less well-marked subspecies. The skin before me has the head, back, and throat metallic coppery green, thus resembling the specimen from Angola described as *C. chalcus* by Hartlaub.

The wing measures 64 mm. Skins from Sierra Leone and Senegambia before me have the wing shorter, skins from the Congo equally long or longer. One from Senegambia is nearly as green as the one from the Shiré River.

13. *Anthreptes hypodila* (Jard.).

♂ ad. September 20th, Monkey Bay. "Iris brown."

14. *Macronyx croceus* (Vieill.).

June, Upper Shiré River. Crops and stomachs were found full of insects. It sings while sitting on a bush as well as in the air with expanded wings and tail.

15. *Motacilla vidua* Sund.

Shot in June and February on the Upper Shiré.

16. *Motacilla campestris* Pall.

February, Upper Shiré River.

17. *Pyrrhulanda leucotis smithi* (Bp.).

February and March, near Fort Johnston. " Iris brown."

18. *Passer diffusus* (Smith).

Monkey Bay. (The western bird seems to me to differ considerably from the S. African form.)

19. *Sporaegiuthus subflavus* (V.).

August, Upper Shiré River.

20. *Estrilda angolensis* (L.).

Monkey Bay, B. C. Africa, September 15th. One adult *male*. It agrees perfectly with a series of specimens from the Transvaal in the Rothschild Museum, but the wings are about 1 or 2 mm. shorter than in most of the latter.

21. *Lagonosticta senegala rendalli* subsp. nov.

This name I propose for a pair of *Lagonosticta* obtained by Dr. Percy Rendall in May and March on the Upper Shiré River. The *male* is very similar to *L. minima*, which may or may not be the same as *L. senegala*, but which I think may turn out to be a subspecies of *L. senegala*. However, it differs in the wing being slightly shorter, the upperside distinctly darker. The *female* also has the upperside darker than *L. minima*. Not being able to decide about this form, I sent it to Professor Reichenow, who confirmed my supposition that these birds did not quite agree with any of the described forms, and quoted the differences stated above, which occurred to him when comparing our birds with a series of *L. minima* from North-East and West Africa. *L. s. rendalli* resembles also very much *L. brunnei-ceps*, but the distinct reddish crown and reddish back of the *male* seem to separate it easily from that species. The *male* of *L. s. rendalli* has the "beak cardinal red, with a horn-coloured mesial line; legs and feet of a light horn-colour; irides orange-red; eyelids with yellow margins. The *female* has the iris dark brown; maxilla dark red, with a dark brown mesial line; mandible red, with a deep brown line along the middle below; legs and feet light horn-colour. Stomachs full of grass-seeds."

A nest with seven eggs, belonging to the *male*, was taken on May 9th. The eggs are of a pure glossless white. They measure 13 to 13.6 : 10 to 10.6 mm.

The measurements of *L. senegala rendalli* are as follows :—

♂. l. t. ca. 92 mm., a. 42, c. 34, r. 8.7, t. 12.

♀. a. 49, c. 36, t. 12.

Named in honour of Dr. Percy Rendall.

22. *Vidua principalis* (L.).

February, Upper Shiré River.

23. *Pyromelana nigrifrons* Böhm.(Cf. *J. f. Orn.* 1884, p. 177; *Cat. B. Brit. Mus.* XIII. p. 233.)

One adult *male*, shot on March 6th on the Upper Shiré River. Professor Reichenow has kindly compared this bird with the type of *P. nigrifrons* in the Berlin Museum, and found that my specimen entirely agrees with it, except that the black band on the forehead is a little wider. The wings also seem 2 mm. shorter, but this is of no importance, as they are distinctly abraded. As they are, I measure them as being 65 mm. long. "The iris is dark brown; legs and feet very light horn-colour; bill black."

24. *Plocepasser pectoralis* (Peters).

September 14th and 22nd, Monkey Bay. "Bill dark horn-colour, almost black; iris grey-brown; legs dull brown: feet a little darker."

25. *Hyphantornis xanthopterus* Finsch & Hartl.

March 5th, Upper Shiré River: also June. ♂ ad. "Iris dull orange-brown: bill black; legs and feet dull pinkish biscuit-colour. Crop contained seeds and a few insect remains."

A great number of eggs of these birds, which are not yet described as far as I know, vary enormously. Some are of a pale liver-brown, almost of a faded brick-colour, unspotted; others bluish green, unspotted, almost like a somewhat large rather elongated and pointed egg of *Erithacus phoeniceus*; others are reddish white, all over spotted with purplish brown; others again similar, but the ground-colour more bluish white, the spots and patches larger, rufous brown, thus closely resembling an egg of a *Pycnonotus*; others again are blue-green, spotted with pale greyish brown.

The stupendous variations in coloration of many of the species of *Hyphantornis* are well known (cf. *Journ. f. Ornith.* 1895, pp. 332-335). I found the same in a colony of Weaver-birds on the Benue, where, however, the eggs in the same nest were always similar to each other; and that is no doubt, I think, always the case. My observations were not published, as I did not procure the parent bird, or, rather, lost it while lying ill of fever in a boat.

26. *Lamprocolius sycobius* (Licht.).

June, Upper Shiré River.

27. *Corvus scapulatus* Daud.

♂. July 30th, Upper Shiré River.

Sharpe, Milne-Edwards & Grandidier, Shelley, and others have united the white-breasted Crows of Africa with those of Madagascar. It seems to me, however, that in the skins from Africa the white patch above is wider in extent, reaching farther towards the head: in fact, in a skin shot by Mr. W. L. Distant at Pretoria, the white reaches almost up to the nape, while in specimens from Madagascar all the feathers of the hind-neck are black, so that a narrower band of white remains just at the end of the hind-neck. Large series of well-prepared skins will be necessary to decide whether this is a constant character or not.

28. *Corvultur albicollis* (Lath.).

June, July, Upper Shiré River. "Bill black, with horny white tip; irides dark brown; legs and feet shiny black. The stomachs of three contained fish-scales, bones, seeds, and horrid-smelling patrid matter." The latter probably flesh from carrion.

29. *Dryoscopus major* (Hartl.).

June to August, Upper Shiré River. ♂. "Bill black; iris dark brown; feet dark slate-colour. Generally frequenting dense cover, somewhat skulking in its habits: alarm-note a very harsh 'churr-churrrr,' which is often uttered while the bird bows before you."

30. *Telephonus senegalus* (L.).

September 22nd, Monkey Bay. "Iris stone-grey."

31. *Dicrurus afer* (Licht.).

Evidently common on the Upper Shiré River.

The name *afer* (*Corvus afer* Licht., *Cat. Rev. Nat. Hamb.* p. 10) has been rejected by Sharpe and other authors on account of the existence of a *Corvus afer* of Linnaeus. As, however, Linnaeus' *C. afer* is no *Dicrurus*, Shelley (*Birds of Africa* I. p. 47) is right in adopting the name *afer* for our Drongo. It has been customary among ornithologists to reject all names which were once used before under the same generic name, but no harm can arise from using the same name in widely different genera. The rule "once a synonym always a synonym," as regards specific names, is not adopted in the German Zoological Society's rules of nomenclature. The sooner it is abolished by ornithologists the better. Those who have adopted it so long have not taken into consideration the consequences; namely, that by adopting such a system any recent author may, by mistake or carelessness, or out of evil will, degrade hundreds of existing names to synonyms.

32. *Hirundo smithi* Leach.

In May and July, Upper Shiré River, nesting. A pair built a nest of clay against one of the rafters in a store in July.

33. *Hirundo rustica* L.

February, Upper Shiré River.

[It is strange that the collection contained no specimen of an Oriole, but to make up for this want I may be allowed to mention that the Rothschild Museum has some time ago received from Nguru, in German East Africa, a fine pair of

Oriolus chlorocephalus Shelley,

which was described from Mount Chiradzulu, in the Shiré Highlands, Nyassaland, of which, as far as I am aware, only the type-specimen is known.]

34. *Coracias caudatus* L.

July and August, Upper Shiré River and Kambwe, Lake Nyassa. "Bill black; iris brown; legs dull yellowish horn-colour; feet darker." Stomachs of all full of beetles, locusts, Gryllidae. Sits often on a dead tree, from which it hawks for insects. Harsh grating alarm-note."

35. *Merops nubicoides* Des Murs & Puch.

A *male* and a *female*, both shot on the shore of Lake Nyassa on July 5th, 1895, have the crowns rather bright bluish, and the red of the back somewhat light, if compared with a series of nine skins from the Transvaal and the Congo region. If a larger series of specimens from Lake Nyassa constantly shows these differences, they could be separated subspecifically.

36. *Merops persicus* Pall.

February 26th, Upper Shiré River.

37. *Merops boehmi* Rehw.

A *male* and a *female* were shot in June and July on the Upper Shiré River. "Bill black; irides crimson; feet horn-colour; tarsus purplish brown. Stomachs full of Hymenoptera and other insects. Shot when sitting hunched up on a bough, its tail wagging backwards and forwards." The capture of this rare species of Bee-eaters so far south extends its known distribution considerably.

38. *Melittophagus meridionalis* Shell.

June 26th, Upper Shiré River. "Bill shiny black; irides carmine."

39. *Caprimulgus fossei* Hartl.

♀. April, Fort Johnston: ♂. June, Upper Shiré River. "Bill horn-colour, with a lighter shade on the lower mandible; iris dark brown; tarsus flesh-colour, verging to light brown on the feet."

The *female* differs from the *male* in having the white line across the wings, formed by the tips of a line of smaller upper wing-coverts, deep buff; the white spots in the middle of the primaries brownish buff on the outer webs; the outer webs of the outermost rectrices brownish buff. The nostrils are rather prominent in this species, as also noticed by Dr. Rendall on the labels.

40. *Ceryle rudis* (L.).

Common on the Upper Shiré River.

41. *Corythornis cyanostigma* (Rüpp.).

Evidently common on the Upper Shiré. An immature *male* has the bill blackish brown (instead of vermilion in the fully adult bird); the wing-coverts deep brown, with a light cobalt anteaical bar; the feathers of the back dark brown, with very large light cobalt tips; below paler and more brownish, but the entire pileum and crest well developed and of the same colour as in the adult birds.

42. *Irisor viridis* (Licht.).

In moult in June, Upper Shiré River. "Bill sealing-wax-red; iris dark brown; feet coral-red. Stomach full of insects and larvae. Birds restless, uttering a loud harsh chattering scream."

43. *Colius affinis* Sharpe.

One *female*, New Heligoland, German East Africa, August 17th. "Bill black, with white patch on maxilla and white tip to mandible; iris light yellow; legs coral-pink, posteriorly dirty brown. Stomach contained various large seeds and vegetable matters. The specimen shot was one of a party of eight."

This skin agrees with one received from Prof. Reichenow as *C. affinis* Sharpe, and with the description of the latter author in the *Catalogue of Birds* (XVII. 342), but the figure of the species on Pl. XII. must be called bad, as it does not at all show the silvery grey colour on foreneck, ear-coverts, and sides of neck.

(We received this species also from Muanza, on the south end of the Victoria Nyanza.)

44. *Coccytes glandarius* (L.).

March 5th, Fort Johnston. "Iris dirty yellowish brown. Stomach full of hairy caterpillars."

45. *Coccytes jacobinus* (Bodd.).

March 16th, Fort Johnston. "Iris dark brown. Stomach full of hairy larvae."

46. *Chrysococcyx cupreus* (Bodd.).

♀. February, Upper Shiré River. "Iris light brown, of a kind of stone-colour, merging into grey on the periphery; maxilla very dark brown, almost black; mandible of a bluish grey steel-colour; legs and feet dark horn-colour."

47. *Indicator indicator* (Gm.).

♀. June 6th, Lake Nyassa. "Iris light hazel; legs slaty brown; bill light horn-colour. **The crop contained a mixture of bees-bread, wax, and remains of insects.**"

48. *Centropus natalensis* Shelley.

From June, July, August, Upper Shiré River. I have no doubt that all these specimens belong to *C. natalensis*, but they vary, and some approach *C. senegalensis* in certain characters. The head in a freshly moulted example is distinctly glossed with blue, much more so than the more greenish tail. This same bird has *no* bars on the base of the tail-feathers, *no* whitish shaft-lines on the mantle, *no* indication of a whitish eyebrow, but it has the tail-coverts barred and distinct whitish edges to all the rectrices. Its wing measures only 166 mm. One of the lateral rectrices is snow-white. In none of the skins is the superciliary stripe well developed. A nest with four eggs was found on June 25th. It was a very loosely built domed nest, standing in tall papyrus rushes about five feet above the ground. Outside it consisted of coarse grass, inside of fine grass. The hole was on the side of the nest. The eggs are of a chalky white without gloss, and measure 34.6 to 34.5 : 23 mm.

49. *Gallirex chlorochlamys* Sh.

Monkey Bay, Lake Nyassa, June 2nd, 1895. ♀. "Beak black; legs dark slaty brown; iris brown. Crop full of large stoned fruit."

50. *Schizorhis concolor* (Smith).

Monkey Bay, Lake Nyassa, September 22nd. " Iris brown. Stomach seeds. Cry similar to 'Go away' and 'Garrh.' "

51. *Bycanistes buccinator* (Temm.).

♂ ad. August, Kambwe, Lake Nyassa. " Bill and casque black, flecked and streaked with dirty yellowish white; irides red-brown; bare space round eyes lake-colour above, vermilion below; tarsus and feet brownish horn-colour, slaty blue posteriorly. The stomach was full of small figs. The bird was shot out of a party of six. They had a harsh wailing cry."

52. *Lophoceros melanoleucus* (Licht.).

♀ ad. September, Monkey Bay. " Bill orange-red, base to both mandibles yellowish; naked patch of skin on throat at base of mandible bright blue; iris light yellow; tarsus and feet brownish black. Stomach large seeds."

53. *Lophoceros epirhinus* (Sundev.).

June and July, Upper Shiré River, Monkey Bay. " Iris dark hazel. Stomachs large seeds and figs."

54. *Lophoceros erythrorhynchus* (Temm.).

♂. September, Monkey Bay. " Iris chrome-yellow." Stomach full of ants and other insects.

55. *Poocephalus fuscicapillus* (Verr.).

In July at Mdokas on Lake Nyassa and Upper Shiré River. ♂. " Maxilla slate-colour, much darker at tip; mandible dirty white; sooty black round eyes, cere sooty black; iris orange-yellow, with a dull yellow periphery; tarsus and feet dark slate-grey."

56. *Glaucidium perlatum* (Vieill.).

♂ ad. July, Upper Shiré River. " Iris light yellow." Stomach small rat.

57. *Asio capensis* (Smith).

♂ ad. May, Upper Shiré River. " Iris very dark brown; beak dark slate-colour, tipped with light horn-colour; soles of feet pale yellow, claws dark horn-colour."

58. *Bubo maculosus* (Vieill.).

♂ ad. May, Upper Shiré River. " Weight 1¾ lb. Iris bright yellow; eyelids slaty-grey; beak and claws dull dark slate-colour. Crop large beetles and small rodents."

59. *Elanus caeruleus* (Desf.).

Lake Nyassa, July, August, the latter a young bird. The stomachs of two contained rats.

60. *Falco ruficollis* Swains.

♂. July, Upper Shiré River. "Bill horn-colour at tip, dull yellow at base; lores and cere chrome-yellow; tarsus and feet bright orange-yellow, claws dull black. Stomach contained remains of a small bird."

61. *Pseudogyps africanus* (Salvad.).

♂ ad. Upper Shiré River, July 7th, 1895. "Bill with bare skin at base, and round the eyes very dark slate, almost black; irides brown; tarsus and feet slaty black. Stomach pieces of crocodile."

62. *Lophogyps occipitalis* (Burch.).

♀ ad. Upper Shiré River, July 7th. "Bill, distal half orange-red, basal half greenish blue; irides brown; upper part of bare throat and neck purple; naked skin round eyes, eyelids, and base of beak inclining to pink; tarsus and feet white with pinkish tinge; claws very dark blackish horn-colour." The young *female* had the "irides hazel; claws horn-colour, with pale brownish bases; legs yellowish white, and all the other colours fainter."

In both the old and young bird I find the bare part of the throat and foreneck crossed by narrow lines of dark brown caruncles, very obvious in the old, only thin and softer in the young bird.

63. *Haliaeetus vocifer* (Lind.).

Young in first plumage, with parts of down left (not sexed), and ♀ ad. Upper Shiré River, July. The young bird had the "bill dark horn-colour; irides light yellow; claws dirty white. In the stomach were fish-bones."

64. *Milvus aegyptius* (Gm.).

Adult birds with yellow bills in August and September on the Lake and on the Shiré River.

65. *Cerchueis dickinsoni* (Sel.).

♂. July 31st, Upper Shiré River. "Bill dark slate-colour, fading to dull yellow at base of mandible; cere and lores bright lemon-yellow; irides dark brown; tarsus and feet lemon-yellow; claws brownish black. Stomach contained large grasshoppers."

66. *Oena capensis* (L.).

This common African bird was met with frequently. It bred in June.

67. *Turtur semitorquatus* (Rüpp.).

Upper Shiré River. "Iris bright orange-red."

68. *Turtur damarensis* Shell.

May, Lake Nyassa. "Iris very dark hazel."

69. *Chalcopelia afra* (L.).

Mdokas and Upper Shiré River.

70. *Pternistes nudicollis* (Bodd.).

♂. Upper Shiré River, June 26th. "Bill orange-red, base vermilion; triangular bare space behind eye, chin, and forepart of throat vermilion-red."

71. *Francolinus johnstoni* Shell.

An immature *male*, September 19th, Monkey Bay, Lake Nyassa. "Maxilla dark horn-colour; mandible very light horn-colour; iris yellowish brown; legs brownish orange, edges of scales blackish. Stomach seeds."

72. *Numida mitrata* Pall.

♂ ♀. Upper Shiré River. ♂ ad. "Bill horn-colour at tip, then whitish, shading to brown on upper and red on lower mandible; round eye and throat as well as at the base of the wattles brilliant blue; iris brown; forehead and base of beak vermilion, fading to brown on the helmet; legs and feet slate-colour. Stomach full of various kinds of seeds."

73. *Otis melanogaster* Rüpp.

An immature *male*, Upper Shiré River, March; in moult. "Iris yellowish brown, with pupillary margin of a darker shade; bill horn-coloured above, greenish white below; legs and feet dull greenish yellow, light in tint. Stomach filled with locusts and other insects, together with some vegetable matter."

An egg of this species was found on December 7th, on the Inchila plain. The bird got up under Dr. Rendall's feet. The nest was only a shallow hollow in the ground, with practically no nest at all. The egg was quite fresh. It is of the same colour as most European and other Bustard eggs, with larger brown and mostly smaller deeper-lying spots and patches of a lilac-grey, and almost perfectly round, measuring 55 : 53.1 mm. As several eggs of *Otidæ* are described as being very round, the extremely round form of this egg is probably not abnormal. The egg does not appear to have been described before.

74. *Balearica chrysopelargus* (Licht.).

♂ ad. August 8th, on the S.E. arm of Lake Nyassa. "Bill blackish horn, as is also the bare skin round its base; bare oral patch behind eyes white, tipped with orange-red on its upper segment; legs, tarsus, and feet dull slate-grey, blacker below; irides silvery white. The stomach contained grit, mapira, and a few fresh-water shells and helices."

75. *Porphyrio porphyrio* (L.).

Common. Irides brownish red or orange.

76. *Porphyrio alleni* Thomps.

♂ ad. May, Upper Shiré River. "Bill dull red at tip, base and frontal shield dull slate-colour; irides deep crimson; legs bright orange; tarsus, feet, and claws dark red-brown."

77. *Limnocorax niger* (Gm.).

June, July, Upper Shiré River, adult and young. ♂ ♀ ad. "Bill greenish yellow; eyelids crimson; iris dark orange-red; feet and legs coral-red, claws horn-brown. The stomachs of all contained red seeds, grit, water-shells, and vegetable matter." ♂ jv. "Bill horn-brown, light patch above nostrils and at tip; iris brown; legs and feet dark reddish brown."

78. *Parra africana* Gm.

Upper Shiré River. According to Dr. Rendall the adult *males* and *females* are alike.

79. *Cursorius temmincki* Swains.

May and July, Upper Shiré River. ♂ ♀ ad. "Bill dark horn-colour, except the proximal half of mandible, which is dull yellow; feet yellowish or pinkish white, claws dark horn-colour. Crops and stomachs beetles and grasshoppers."

80. *Glareola pratincola* (L.).

October 8th, 11th, 12th, Upper Shiré River. The stomachs and crops of all contained locusts and grasshoppers.

81. *Oedicnemus vermiculatus* Cab.

August, Kambwe and Upper Shiré River. Bill black, shading to greenish yellow at base; eyelids dark slate; irides light yellow; feet dull yellowish green, toes with a bluish tinge in front. Stomachs beetles and Hymenoptera."

Two eggs, slightly incubated, were found on August 5th, at the junction of the Shiré River and Lake Nyassa, in a slight depression of the ground, with a few pieces of grass as a lining. The eggs are of the well-known character of *Oedicnemus* eggs, with a rich buff ground-colour and rather heavy blotchings all over, and measure 48—49.5 : 32.5—33 mm. They are like small eggs of *Oedicnemus oedicnemus* (L.). The parents were very vociferous, but rather shy, even when the eggs were taken.

82. *Lobivanellus lateralis* (Smith).

♂ ♀ ad. June and August, Upper Shiré River.

"Basal half of beak and wattling round eye light chrome, dependent wattles orange-yellow; frontal wattle cardinal red; irides greyish, with inner bluish ring; legs light chrome-yellow; tip of beak and claws black. Stomachs and crops full of black weevils and other beetles and grit."

83. *Defilippia leucoptera* (Rehw.).

A mutilated specimen, caught by natives in August, Upper Shiré River.

♂. "Bill, terminal portion black, proximal dull lake-colour; wattled eyelids vermilion; irides light orange, verging to yellowish red; legs red."

84. *Glottis nebularius* (Gunn.).

August 20th, Kambwe, Lake Nyassa.

85. *Tringoides hypoleucus* (L.).

February and August, Shiré River and Kambwe.

86. *Aegialitis pallida* (Strickl.).

In August on the shores of Lake Nyassa.

87. *Aegialitis pecuarius* (Temm.).

A young bird shot in March on the Upper Shiré River.

88. *Podiceps capensis* Licht.

April and June, Upper Shiré River. ♂ ad. "Beak black, with light yellow patch at angle; iris hazel; legs and feet mottled dark horn-colour and green."

89. *Larus cirrhocephalus* Vieill.

♂ ad. July, Lake Malombe; juv. April, Fort Johnston. ♂ ad. "Bill red, darker at tip; eyelids carunculated and vermilion in colour; legs red, claws blackish brown; iris light yellow. Stomach fish-bones. ♀ juv. Bill light yellowish brown, tip darker; eyes light hazel; feet dingy yellow. Crop full of locusts."

According to Howard Saunders, *Cat. B.* XXV., the American and African Gulls of this form belong to the same species.

90. *Rhynchops flavirostris* Vieill.

The egg is 33.4 : 24.4 mm. long, pale yellowish green, all over largely patched with deep purplish brown and lower-lying greyish spots.

91. *Chenalopex aegyptiacus* (L.).

♀. August, Kambwe, Lake Nyassa. "Bill dull red, verging to brown; irides reddish yellow; legs and tarsi yellowish white, washed with dull red, darker on the feet. The stomach contained a helix, much grit, and pieces of shell." A fully developed egg was extracted from the body; it is creamy white, and measures 65 : 44 mm.

This undoubted *female* has the wing 14.1 inches long. Salvadori gives 16 inches as the length of the wing of the *male*, and says that, according to Finsch, the *female* is smaller.

92. *Dendrocygna fulva* (Gm.).

♀ ad. April, Fort Johnston. "Bill dark grey, verging to black; eyes hazel; legs, feet, and webs dark blue-grey. In flocks at dusk." Immature ♂. October, Upper Shiré River. "Bill dull French grey; iris dark brown; legs and feet steel-blue. Stomach vegetable matter."

93. *Thalassornis leuconota* (Smith).

♀ ad. June, Lake Malombe. "Beak with tortoiseshell mottlings and streaks; irides dark brown; legs dark steel-colour."

94. *Poecilonetta erythrorhyncha* (Gm.).

♀. February 15th, Upper Shiré River. "Iris brown; bill deep dark red, verging to dull black at tip of maxilla: feet and legs brownish slate."

95. *Nyroca brunnea* Eyt.

April and June, in flocks, Upper Shiré River. "Bill black; iris dark brown; legs and feet dark steel-colour."

96. *Herodias alba* (L.).

Upper Shiré River, middle of June. ♂ ad. "Beak gamboge-yellow, tipped with dark horn-colour, dark green round the gape; eyelids and bare skin round and in front of eye greenish yellow; irides pale yellow; tarsus and feet shining black." In the crops small fish and an enormous water (?) beetle were found.

97. *Ardea melanocephala* Vig. & Childr.

♂ ad. Upper Shiré River, June; ♂ immat. May 11th. ♂ ad. "Maxilla blackish horn-colour; mandibula light horn-colour, yellowish towards the tip; feet and legs dull black; irides light yellow; eyelids yellow, bare space in front of eye yellowish green." The crop of one contained two small lizards and two different species of *Gryllidae*: that of another, two rats and remains of lizards.

98. *Phoyx purpurea* (L.).

Several immature birds, shot in July on the Upper Shiré River. "Bills dark horn-colour above, verging to dull greenish yellow on the lower mandible and towards the base; irides light yellow; legs yellowish green; tarsi and feet dark horn-colour anteriorly, dull yellow posteriorly; nails dark horn-colour. The stomachs contained fishes and some pieces of rush."

99. *Melanophoyx ardesiaca* (Wagl.).

♂. March 7th, Upper Shiré River. "Iris deep brown; bill black; legs black, feet bright chrome-yellow, claws black. Stomach full of small fish with transverse bars (? *Hemichromis* ? sp.). Shot out of a flock of about thirty individuals."

100. *Bubulcus lucidus* (Rafin.).

May, June, and August, on the Upper Shiré River. ♂ in non-breeding plumage. "Eyelids, base of maxilla, mandibula, and naked space in front of the eyes greenish yellow; rest of maxilla dark horn-colour: legs and feet dull yellowish green; irides light yellow. In the crops and stomachs small fish, insects, and vegetable debris were found."

101. *Platalea tenuirostris* Temm.

♂. Lake Malombe, September 20th, 1895.

102. *Ibis aethiopica* Lath.

♂. September 11th, Upper Shiré River. "Head and neck dull black; bill shiny black; legs and feet very dark red, shading to blackish horn-colour; iris brown. Stomach containing small landshells (helices), beetles, and remains of fish."

103. *Hagedashia hagedash* (Lath.).

♀. September, Upper Shiré River. "Bill dark red, verging into blackish brown; irides dark hazel; legs dark horn, fading to reddish on the feet. The stomach contained mapira seeds."

104. *Scopus umbretta* (Gm.).

June and July, Upper Shiré River. "Bill, feet, and legs black; irides dark brown. In the stomachs and crops small fish, crustaceans, Gryllidae, and in one some long thin bones of some small mammal were found." On June 6th an enormous structure was found, with a hole in the side, from which, slightly incubated, five eggs were taken. The arm had to be thrust in up to the shoulder to procure the eggs. The eggs are of a dead white, slightly greenish yellow if held up against the daylight. They measure 44 : 34, 45 : 34, 45.5 : 34.4, 44.5 : 33.5 mm.

105. *Leptoptilus argala* (Temm.).

October, Lake Malombe. "Bill dirty yellowish white; irides brown; legs and feet greyish black. The stomach contained remains of fish."

106. *Phalacrocorax africanus* (Gm.).

Four immature birds with dirty white under parts, shot in June, July, and September on the Upper Shiré River. "Bill dark horn-brown, fading to dirty yellowish on the lower mandible; skin in front of the eye dull yellow; gape orange; irides brown; bare skin on upper throat yellowish pink; feet shiny black. The stomachs always contained fish, but once some small worms were also found. These birds were sometimes in September seen in large flocks."

107. *Plotus levillanti* Licht.

♂. September 21st, Monkey Bay. "Bill shaded horn-colour, darker above, base of a dark flesh-colour; legs and feet black; iris dark brown. Stomach fish and numerous small parasitic worms (? taenia)."

108. *Pelecanus rufescens* Gm.

Young ♂. June, Upper Shiré River. "Irides light yellow; bare patch around eyes yellow; beak dirty yellowish white; legs light yellow; fleshy pouch light yellowish, dull white, or greenish. Stomach fish."
